

## **The Growing Importance of Passenger Rail**

I grew up in Chico, CA, a modest city of 80,000. For the early years of my life, United operated a daily flight to San Francisco, with which I could fly to my grandparents in Richmond or my family in Oakland. When I was 14, United phased out their smaller prop planes and couldn't justify a larger jet to Chico. It was at this point in my life that I realized the value of Amtrak.

There are three features that elevate rail travel above other modes of transport. Principally, it is land-based transportation. Whereas planes can connect two points without any intermediate infrastructure, Amtrak has to pass through small communities and endless landscapes between major cities. This allows Amtrak to spend mere minutes to stop in these small cities, adding incredible value along the way and enriching the sparse connections available to cities like my hometown of Chico.

Despite this incredible value, I argue that railways are far superior to all other modes of transit by one key metric: the low marginal cost of carrying additional passengers. With buses and planes, the vehicle unit has a set capacity. With trains, however, that base vehicle unit has a variable capacity by virtue of being made up of individual interchangeable railcars. What this means is that while airlines have to hire more pilots for each additional flight they operate, trains are free to add more cars without adding engineers or frequencies to the timetable. The marginal cost of rail travel is far lower. In tandem with the smaller communities trains can serve, this strong economic foundation allows Amtrak to offer far lower fares to passengers outside major cities than airlines. This is why, when United left Chico because they couldn't justify daily flights, Amtrak remained economically viable. Trains are perfect to fill the niche in markets that are too small for airlines yet too far for buses.

The final feature that, in my mind, necessitates the use of rail travel in the future is the climate crisis and rail transportation's low carbon footprint. As people flock to public transportation, it's important to note that not all public transportation is created equal. The rubber tires of buses lose incredible amounts of energy through friction, making them energy inefficient. Planes are even worse, with immense energy required to practically levitate hunks of metal. Trains, on the other hand, run steel-on-steel. In other words, they can carry vastly more people

with much greater energy efficiency, and with the onset of Amtrak's new Siemens Chargers and lighter trainsets, the choice will become obvious for climate-conscious Americans. I personally choose Amtrak over airlines whenever possible to preserve the beautiful scenery I see out the window, and for this America needs trains more than ever before.

Greater connections, better economics, and superior sustainability - these are the benefits of an industry I intend to dedicate my career to. America's rail industry is immeasurable in its importance, and with increasing climate-consciousness and infrastructure spending, its importance will only grow.